Chapter 4

Control

This chapter describes the keypad presses and remote control commands required to use your ***CDQPrima***

4. Command and Control Summary

There are three ways to control the ***CDQPrima***: the front panel keypad and display, a remote terminal, or an optional Windows® Remote Control program. You can enter all commands and access all functions by working through the command menu tree (see the ***CDQPrima*** Technical Reference Manual) using the built in cursor, alphanumeric keypad and LCD display. A computer (running any terminal emulation program) or terminal can connect to the ***CDQPrima*** for configuration and control using the built in commands and the powerful PLL (Prima Logic Language) command language. Using a computer or terminal makes it possible to send and execute a large number of commands and actions to a far end ***CDQPrima.*** An easy-to-use Windows® Remote Control program is also available for configuring and controlling several locally attached and far-end ***CDQPrima***s.

Only the basic ***CDQPrima*** functions will be discussed here. More advanced control functions, such as Prima Logic Language and psychoacoustic parameter adjustments are discussed in the ***CDQPrima*** Technical Reference Manual.

The ***CDQPrima*** Remote Control Manual, available from MUSICAM USA upon request, or on-line at www.musicamusa.com, discusses the full command syntax for the nearly 200 commands used to control the ***CDQPrima*** from a terminal. Please note that on-line help is available for all commands.

All three methods of ***CDQPrima*** control are discussed in this guide. For each function, the terminal commands and the Windows 'clicks' are shown next to the menu commands. Function and syntax details of each command are available on-line or can be found in the ***CDQPrima*** Remote Control Manual.

4.1 Menu Navigation using Keypad and Display

Most ***CDQPrima*** functions can be set from the front panel keypad; using the menu on the LCD display.

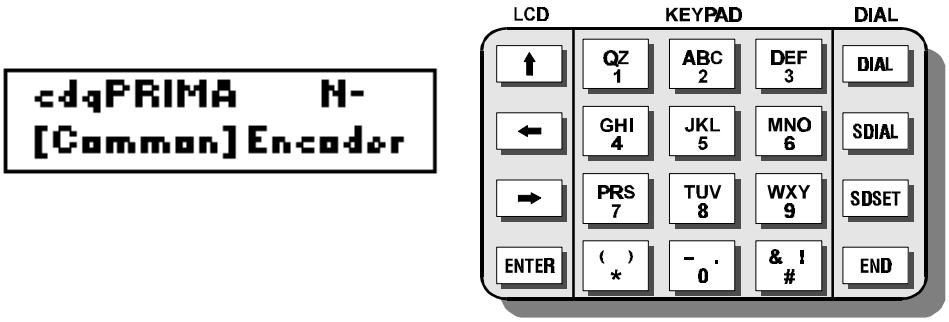

Figure 4-1 Model 110 and 210 Display and Keypad

The following discussion of menu navigation is based on the basic keypad and display as shown in Figure 4.1. The enhanced and extended keypads offer more flexibility, but all functions are accessible using the basic keypad. To use the keypad and display, use the arrow keys to move the cursor (the [ ] brackets) to the desired selection. Press the ENTER key to execute that selection or move down one layer of the menu tree. **Pressing the up arrow key at any time will bring you up one layer of the menu tree**. At any given time, only a limited number of the available options are shown on the screen. **Several presses of the left and right arrow keys may be required to scroll to the desired selection.**

The alphanumeric portion of the keypad is used to enter numbers or text for those commands that require it. Each key of the alphanumeric keypad represents up to 4 characters. For example, pressing the "QZ1" key once will enter a "1." The second press of the same key will enter a "Q," the third press a "Z," and the fourth press will enter a space. Once the

A space is added to the character string by pressing the "1" key four times, not by moving the cursor to the next position with the arrow key.

!note:

Two shorthand notations will be used throughout the remainder of this manual. Examples are shown here:

```
[Common] Encoder Decoder Maint ...
TA Setup  Dig I/F  [Spd Dial]  System LB  ...
View dir  [Edit dir]  Add entry  Del entry
```

and

<Common><Spd Dial><Edit dir>

Both notations shown above have the same meaning: Start at the top of the menu tree, move the cursor (the square brackets) to "Common" and press ENTER. Next, move the cursor to "Spd Dial" and press ENTER. Finally, move the cursor to "Edit dir" and press ENTER.

A pull-out menu tree can fe found in Appendix A of the ***CDQPrima*** Users Guide.

4.2 Remote Control Considerations

If you will not be using remote control, you can skip the remainder of this chapter.

The ***CDQPrima*** may be completely remote controlled by a host computer or terminal. The computer or terminal can be co-located with the ***CDQPrima***, or can be located thousands of miles away and connected through a modem. The remote control connection can be made directly, through a modem, or even through the network carrying the compressed audio bit-stream. A rich command set can be used to control the entire operation of the ***CDQPrima***. See the ***CDQPrima*** Remote Control Manual and the ***CDQPrima*** Technical Reference Manual for a complete description of ***CDQPrima*** remote control commands. A powerful and easy-to-use remote control program that operates under Microsoft Windows® is also available. Alternatively, any terminal emulation program can be used on any computer platform as long as up to 38,400 Baud, 8 data bits, 1 stop bit, and no parity is supported.

4.2.1 Remote Control

The ***CDQPrima*** can be locally controlled and configured via RS232 or RS485. The RS232 and RS485 port is not a standard configuration and a special cable is required. Refer to Appendix A of the ***CDQPrima*** Technical Reference Manual for the wiring of the required adapter

cables. Control and configuration from a remote location can also be accomplished through the digital network.

4.3 Computer or Terminal Control

The RS232/RS485 remote control port permits control and operation of the ***CDQPrima*** from an attached terminal or computer. Computer control can be either from a terminal emulation program or from within a user written control program. These user programs can be written in any language that supports RS232 or RS485 I/O, and are beyond the scope of this manual. Any terminal emulation program that supports VT-100 emulation can be used, including those programs that come standard with Microsoft Windows. Terminal emulation programs are available for most platforms, including IBM, Macintosh, and Sun.

!note:

Only one RS232 device can be controlled from a single RS232 terminal; However, RS485 control allows multiple ***CDQPrimas*** to be controlled from a single controller in an addressed fashion. Refer to the ***CDQPrima*** Technical Reference Manual for RS232/RS485 remote configuration. **Please note that it may be necessary to use the keypad and display method to make the RS232/RS485 control active for the first time. Also note that non-standard cables are required for remote control. Refer to** the ***CDQPrima*** Technical Reference Manual **for cable information.**

4.4 Windows® Control

You can download a 30-day trial version of the Windows Remote Control Program from our Web Site:

www.musicamusa.com

A Windows remote control program is optionally available for use with all ***CDQPrima*** models. This is by far the easiest method of controlling the ***CDQPrima***, but it does require a computer running Microsoft Windows version 3.0 or higher. No Macintosh version is currently available, but this program will run using most Windows Emulation software packages. This is a full control program using the familiar features of Windows, such as drop-down menus, dialog boxes and icons. Using the RS485 interface, multiple units can be controlled within the same window. As with terminal control, it may be necessary to use the keypad and display method to configure the remote port of the ***CDQPrima*** before the Windows control program can be used. The Windows control program also makes control of the far end ***CDQPrima*** a simple point-and-click procedure. An additional feature, only available when using the Windows Remote Control program, is the addition of a VCR-like timer, with up to 20 events, for unattended operation of your ***CDQPrima***. In addition, the 8 Hot Key functions,

standard on Model 230, are available with all models when using this program. A sample screen is shown below:

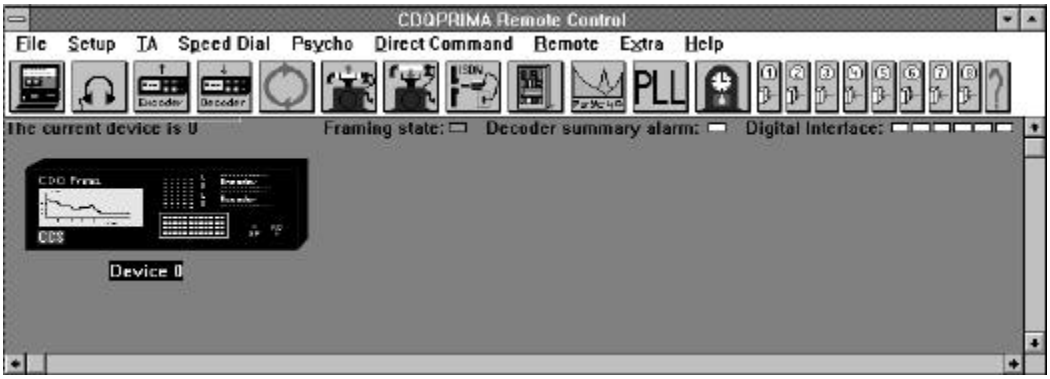
CDQPRIMA Remote Control
File Setup TA Speed Dial Psycho Direct Command Remote Extra Help
The current device is 0
Framing state:
Decoder summary alarm:
Digital Interface:
Device 0

Figure 5-2 Main Screen for Windows Control

!note:

Please note that in the following listings, an 'N/A' in the columns representing the Windows 'clicks' means that there are no shortcut 'clicks' for this function. You can still access that function using the 'Direct Command' pull-down window available in the Windows program.

4.5 Configuring The Remote Control Ports

The factory default settings for the remote control ports are:

Rear Panel:	Front Panel:
Port baud = 9600	Port baud - 9600
Protocol = NO	Protocol = NO
Command Echo = YES	Command Echo = YES
Interface = RS232	
ID = 0	

If the computer or terminal settings are different from these, you will have to manually configure the R/C port, otherwise, you can skip this section.

[Common] Encoder Decoder ...

... User Profile **[RPRmt Ctl]** FPRmt Ctl ...

Set ID Interface Port Baud ...

MENU NAVIGATION	COMMAND	WINDOWS RC	DESCRIPTION

MENU NAVIGATION	COMMAND	WINDOWS RC	DESCRIPTION
<Common><RPRmt Ctl><ID>	CID	Remote, Settings	Set rear panel RS485 ID
<Common><RPRmt Ctl><Protocol>	CPC	Remote, Settings	Set rear panel RC protocol
<Common><RPRmt Ctl><Baud>	CRB	Remote, Settings	Set rear panelRC port baud
<Common><RPRmt Ctl><Echo>	CRE	Remote, Settings	Set rear panel RC echo
<Common><RPRmt Ctl><Interface>	CRI	Remote, Settings	Set rear panel RS232/RS485
<Common><RPRmt Ctl><FP Baud>	CRM	Remote, Settings	Set rear panel RS485 port mode
<Common><FPRmt Ctl><FP Baud>	CFB	Remote, Settings	Set front panel RC port baud
<Common><FPRmt Ctl><Echo>	CFE	Remote, Settings	Set front panel RC echo
<Common><FPRmt Ctl><FP Proto>	CFP	Remote, Settings	Set front panel RC protocol

All ***CDQPrima*** models have a rear-panel remote control port that is configurable for either RS232 or RS485 remote control. Models 120, 220 and 230 have an additional front-panel RS232 remote control port that is independent from, and can be configured differently from the rear-panel port.

The remote control ports may need to be configured before they can be used. The factory default configuration for both ports is 9600 baud RS232, no parity, 1 stop bit and 8 data bits. If any settings are not as specified in the factory defaults, you must configure the port from the front panel keypad before it can be used.

Please note that non-standard cables are used for both RS232 and RS485 remote control from the rear-panel port. Refer to Appendix A of the ***CDQPrima*** Technical Reference Manual for cable information.

Set up the remote control interfaces from the keypad by selecting the

<Common><RPRmt Ctl>

or

<Common><FPRmt Ctl>

menu, for the rear-panel or front-panel port. Next, select the port baud rate. Supported rates are 1200, 2400, 4800, 9600 and 38,400 bps.

Next, select Command Echo (duplex). Under normal conditions, this should be set to YES. Protocol should be set to NO when using a terminal emulation program, YES when using the Windows Remote Control program. For a complete description of command protocol, refer to the ***CDQPrima*** Technical Reference Manual.

For the rear-panel port, select the port configuration, RS232 or RS485. If RS232 is selected, the configuration is complete. If RS485 is selected you must now assign a unique address to the remote control port and select the interface type, 2 wire, 4 wire master or 4 wire slave. For most applications, select 4 wire slave. For a complete description of these modes, refer to the ***CDQPrima*** Technical Reference Manual.

4.5.1 RS485 Terminations

Since RS485 is an addressed bus capable of supporting over 30 devices, terminations must be used on the controlling device and on the last device in the chain. If only a small number of codecs, less than 4, will be connected to the RS485 controller, then you do not need to worry about terminations, unless the total wire length is over 50 feet. For long wire lengths, or more than 4 codecs, you must remove the terminations on all codecs except the last unit on the wire.

Carefully open the ***CDQPrima*** and you will see two banks of DIP switches near the rear of the unit. You may have to remove the optional relay board to gain access to the DIP switches. Move all switches to the OFF position to deactivate the terminations.

4.6 Far-End Remote Control

When using a terminal or the Windows Remote Control program with your ***CDQPrima***, you not only have full control of your ***CDQPrima***, but you also have full control of the ***CDQPrima*** *at the other end!*

This is a very powerful feature, but is beyond the scope of this manual. Please refer to the ***CDQPrima*** Technical Reference Manual for further details